

Date: Tuesday, 10/3/2006 2:49:56 PM  
 User: Kim Johnston

## Process Sheet

<b>Customer</b> :	CU-DAR001 Dart Helicopters Services	<b>Drawing Name</b> :	BRACKET ASSEMBLY
<b>Job Number</b> :	28828		
<b>Estimate Number</b> :	10281		
<b>P.O. Number</b> :	N/A	<b>Part Number</b> :	D3183043
<b>This Issue</b> :	10/3/2006	<b>Drawing Number</b> :	D3183 REV C1
<b>Prsht Rev.</b> :	NC	<b>Project Number</b> :	N/A
<b>First Issue</b> :	N/A	<b>Drawing Revision</b> :	C1
<b>Previous Run</b> :	27383	<b>Material</b> :	N/A
	<b>Type</b> :	<b>Due Date</b> :	10/30/2006
	MACHINED PARTS	<b>Qty:</b>	8
<b>Written By</b> :		<b>Um:</b>	Each
<b>Checked &amp; Approved By</b> :	061003		
<b>Comment</b> :	Est Rev: Pick: A 04.02.18 New issue KJ/DS		

## Additional Product

Job Number:



<b>Seq. #:</b>	<b>Machine Or Operation:</b>	<b>Description :</b>
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1.0	M174B2000X01500	17-4 SS Bar
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**Comment:** Qty.: 0.4812 f(s)/Unit Total: 2.8873 f(s)  
 Material: 17-4 SS Bar per AMS 5604/5643  
 (M17-4-B1.500x02.000)  
 Identify for D3183-043  
 Batch: M19478

06/10/25

2.0	BAND SAW	BAND SAW
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**Comment:** BAND SAW  
 / Cut blanks: (1.500" x 2.000") 5.500" long

06/10/25

3.0	HAAS1	HAAS CNC VERTICAL MACHINING #1
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**Comment:** HAAS CNC VERTICAL MACHINING #1

1-Machine D3183-3 as per Folio FA322 and Dwg D3183  
 Identify as D3183-3

2-Debur

3-Scribe batch number.

SD / 06.10.31

4.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
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**Comment:** INSPECT PARTS AS THEY COME OFF MACHINE

SD / 06.10.31

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☒ No ☐ DQA: DP Date: 01/11/01  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Tuesday, 10/3/2006 2:49:56 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BRACKET ASSEMBLY

Job Number: 28828

Part Number: D3183043

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

QC8

SECOND CHECK



Comment: SECOND CHECK

J-G 06/11/01 8

6.0

D312121

Bolt



Comment: Qty.: 2.0000 Each(s)/Unit Total : 12.0000 Each(s)

Pick:

Qty Part Number

Description Batch

2 D3121-21

Bolt

B28704

7.0

D3183045

Bearing Assembly



Comment: Qty.: 2.0000 Each(s)/Unit Total : 12.0000 Each(s)

Pick:

Qty Part Number

Description Batch

2 D3183-045 Bearing Ass

B28836

8.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

Assemble D3183-043 as per Dwg D3183.

SD/JL 06/10/30

9.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

SD 06.11.01

10.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location:

ST412

06/11/01

11.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

SD 06/11/01

Job Completion



C20611101

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	<b>28828</b>
<b>Description:</b> Bracket		<b>Part Number:</b>	<b>D3183-3</b>
<b>Inspection Dwg:</b> D3183	<b>Rev:</b> C1	<b>Page 1 of 1</b>	

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
R0.190	+/-0.030	.190	✓			
R0.063	+/-0.010	.063	✓			
0.182	+/-0.010	.182	✓			
0.070	+/-0.010	.070	✓			
0.100	+/-0.010	.100	✓			
Ø0.201 x 0.100	+/-0.010	.202 x .099	✓			
0.182	+/-0.010	.182	✓			
5.32	+/-0.030	5.319	✓			
5.036	+/-0.010	5.035	✓			
2.120	+/-0.010	2.118	✓			
1.290	+/-0.010	1.290	✓			
0.365	+/-0.010	.365	✓			
0.218	+/-0.010	.215	✓			
1.030	+/-0.010	1.030	✓			
1.90	+/-0.030	1.890	✓			
1.012	+/-0.010	1.012	✓			
Ø0.201 x 0.100	+/-0.010	.202 x .102	✓			
0.182	+/-0.010	.182	✓			
0.786	+/-0.010	.783	✓			
Ø0.392	+0.002/-0.000	.392	✓			
R0.19	+/-0.030	.190	✓			
3.954	+/-0.010	3.952	✓			
0.162	+/-0.010	.160	✓			
R0.19	+/-0.030	.190	✓			
R0.25	+/-0.030	.250	✓			
4.26	+/-0.030	4.260	✓			
2.080	+/-0.030	2.100	✓			
1.155	+/-0.010	1.160	✓			
0.162	+/-0.010	.159	✓			
0.36	+/-0.030	.370	✓			
0.615	+/-0.010	.615	✓			
0.435	+/-0.010	.436	✓			
0.200	+/-0.010	.202	✓			
0.381	+/-0.010	.383	✓			
0.032	+/-0.010	.032	✓			

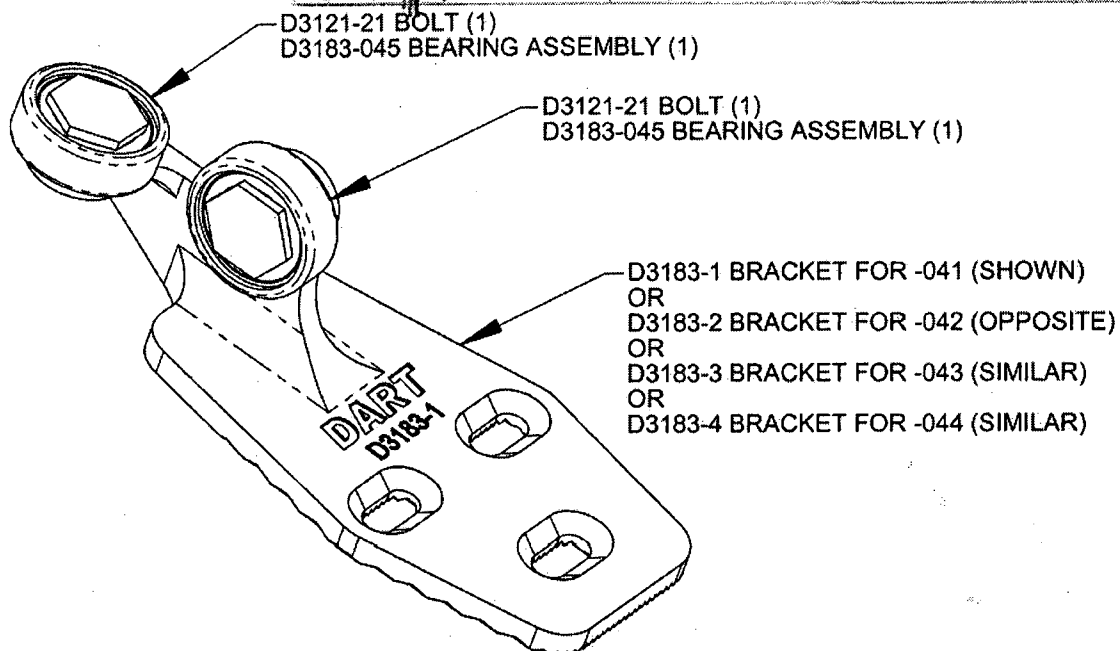
<b>Measured by:</b> J.L.	<b>Audited by:</b> [Signature]	<b>Prototype Approval:</b>	N/A
<b>Date:</b> 06/10/30	<b>Date:</b> 06/10/30	<b>Date:</b>	N/A

Rev	Date	Change	Revised by	Approved
A	03.11.12	New Issue P/O D3183-043	KJ/RF	
B	04.03.15	Changes as per revision C	KJ/JLM/RF	
C	06.03.09	Dwg Rev update	KJ/JLM	[Signature]

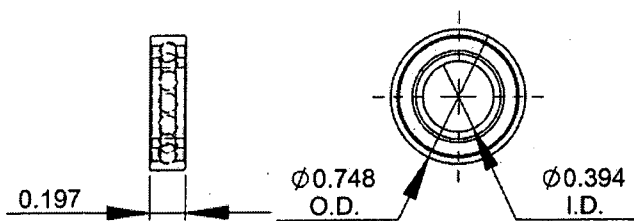


DESIGN #	DRAWN BY CP	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. <b>D3183</b>	REV. C SHEET 1 OF 4
DATE <b>04.02.17</b>		TITLE <b>BRACKET ASSEMBLY</b>	SCALE 1:1
A	03.01.24	NEW ISSUE	
B	03.06.17	REMOVE BEARING; 1.012 WS 0.882	
C	04.02.17	ADD -045/-9; 0.182 WAS 0.431	
CI	# 04.11.09	0.830 WAS 0.850	

RELEASED  
04.03.01

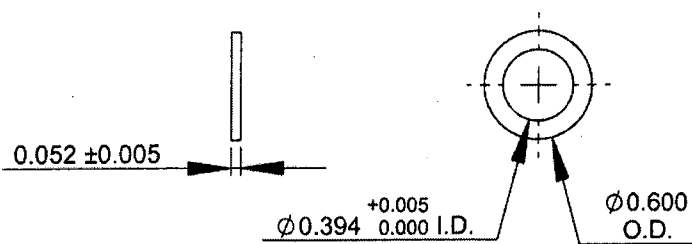


**D3183-041 BRACKET ASSEMBLY (SHOWN)**  
**D3183-042 BRACKET ASSEMBLY (OPPOSITE)**  
**D3183-043 BRACKET ASSEMBLY (SIMILAR)**  
**D3183-044 BRACKET ASSEMBLY (SIMILAR)**



**D3183-5 BEARING:**  
**SPECIFICATION CONTROL DRAWING**

- 1) SINGLE ROW, DEEP GROOVE, SHOP COPY CONRAD TYPE, SHIELDED
  - 2) POSSIBLE SUPPLIER: NSK P/N 680022
  - 3) ALL DIMENSIONS ARE IN INCHES
- RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 28828



**D3183-7 WASHER**

- 1) MATERIAL: AISI 303 ROUND BAR (M303R) ANNEALED
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES

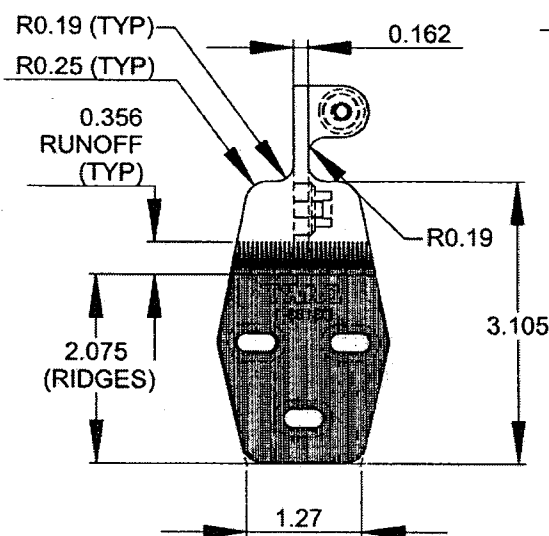
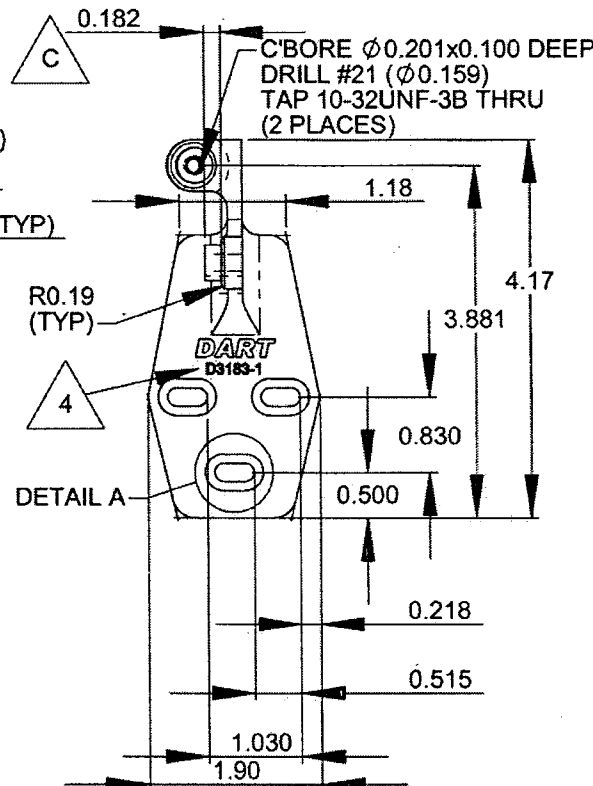
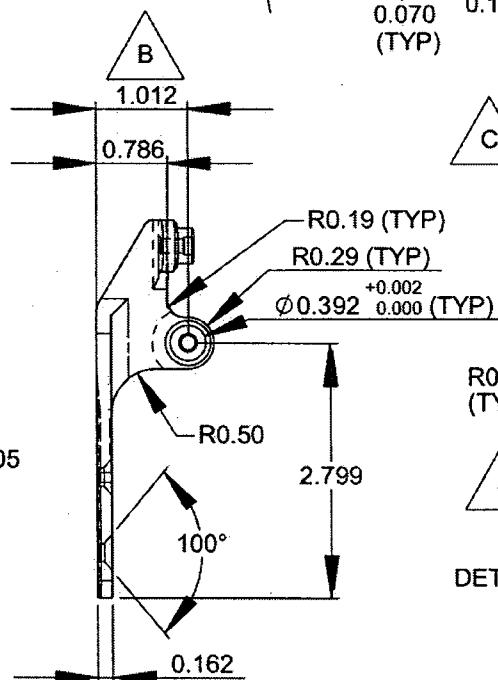
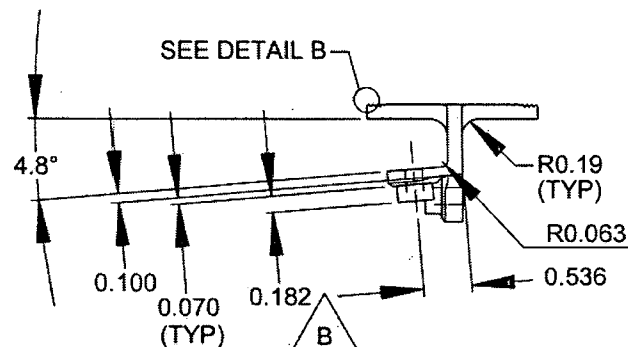
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DESIGN	DRAWN BY	DART Aerospace Ltd
CHECKED	APPROVED	HAWKESBURY, ONTARIO, CANADA
DATE	TITLE	REV. C
04.02.17	D3183	SHEET 2 OF 4
	BRACKET ASSEMBLY	SCALE 1:2

RELEASED  
04.03.01



**D3183-1 BRACKET SHOWN  
D3183-2 BRACKET OPPOSITE**

- 1) D3183-1 CAN BE MADE FROM D3183-3  
D3183-2 CAN BE MADE FROM D3183-4
- 2) MATERIAL: 17-4 SS PER AMS 5604/5643  
(REF DART SPEC. M17-4-B)  
MIN ULTIMATE STRENGTH = 150 ksi  
MIN YIELD STRENGTH = 100 ksi
- 3) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 4) ENGRAVE DART P/N & LOGO AS SHOWN
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES

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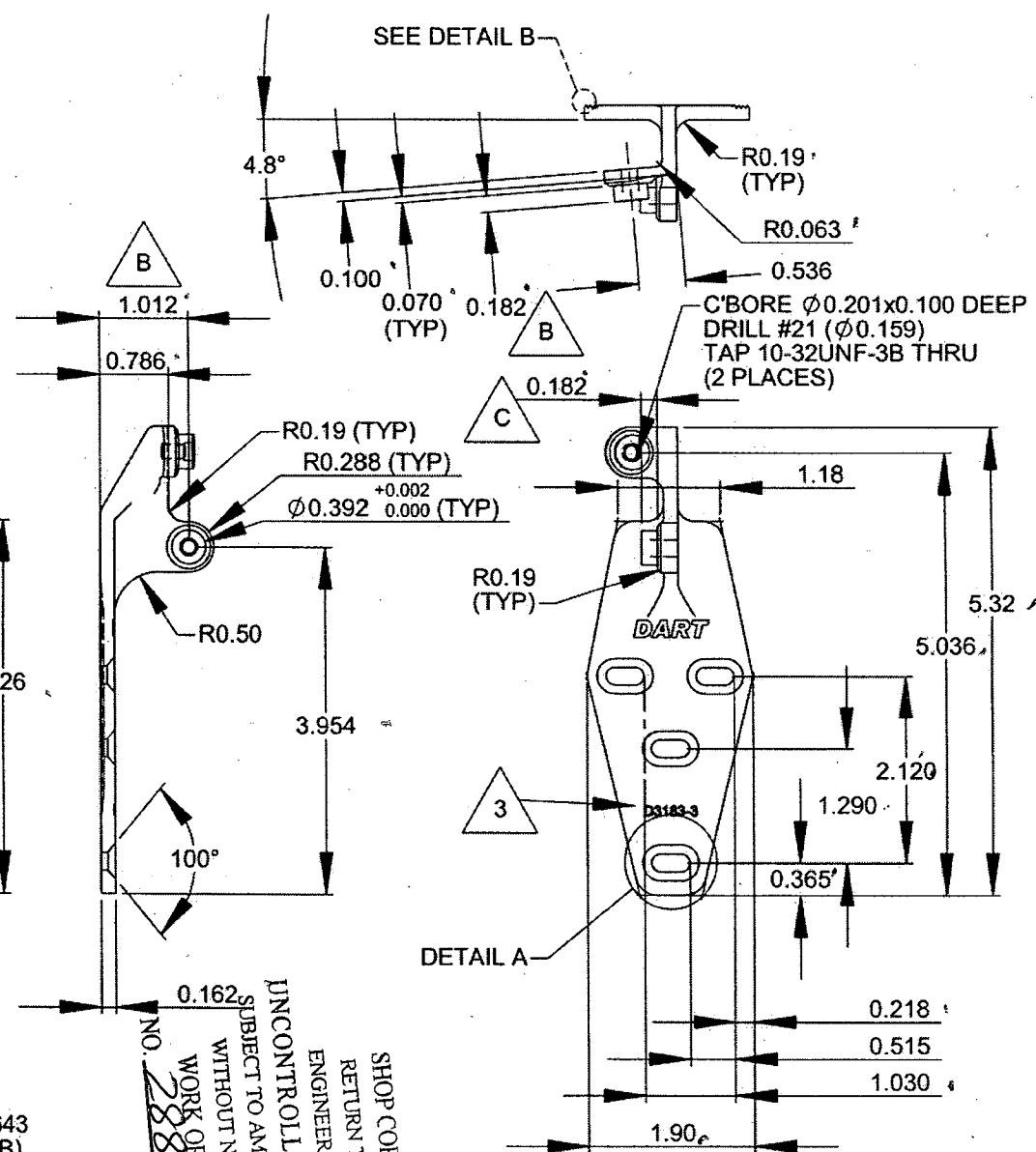
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DATE 04.02.17	DRAWING NO. D3183	REV. C
	TITLE BRACKET ASSEMBLY	SHEET 3 OF 4
		SCALE 1:2



D3183-3 BRACKET SHOWN  
(REPLACES BELL P/N 412-030-304-105)  
D3183-4 BRACKET OPPOSITE  
(REPLACES BELL P/N 412-030-304-106)

- 1) MATERIAL: 17-4 SS PER AMS 5604/5643  
(REF DART SPEC. M17-4-B)  
MIN ULTIMATE STRENGTH = 150 ksi  
MIN YIELD STRENGTH = 100 ksi
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 3) ENGRAVE DART P/N & LOGO AS SHOWN
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

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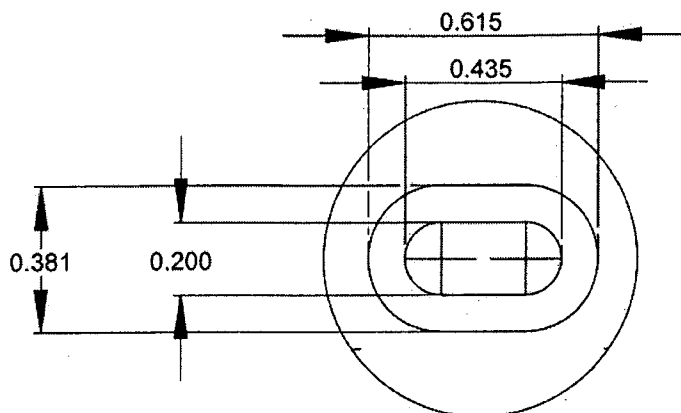
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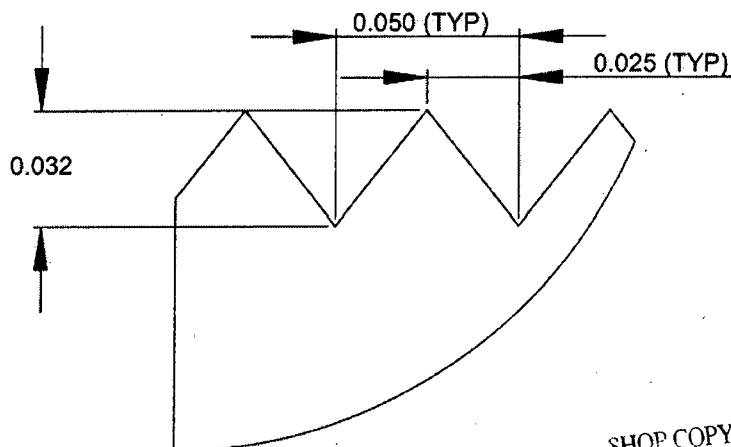


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CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. <b>D3183</b>	REV. C SHEET 4 OF 4
DATE <b>04.02.17</b>	TITLE <b>BRACKET ASSEMBLY</b>	SCALE 1:1	

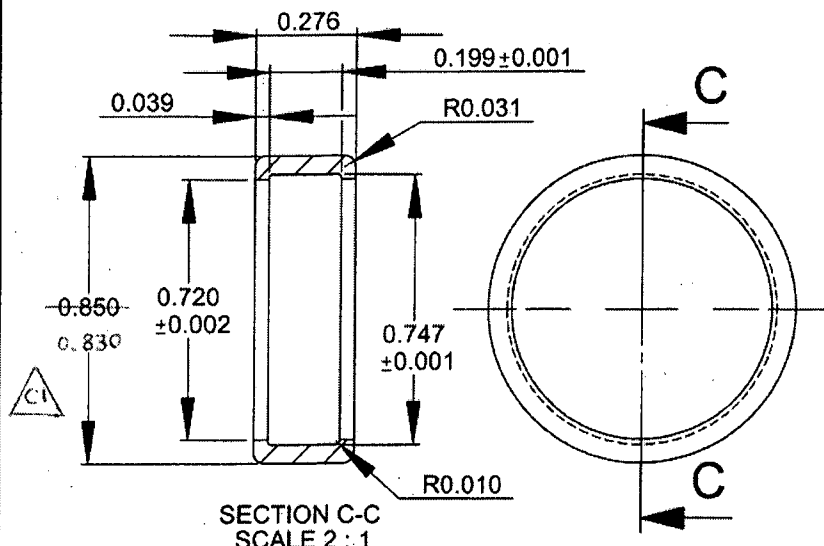


**DETAIL A (2 : 1)**

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04.03.01



**DETAIL B (20 : 1)**



**SECTION C-C  
SCALE 2 : 1**

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WORK ORDER  
NO. **28828**

**D3183-9 CAP**

- 1) MATERIAL: DELRIN ROD, Ø1.00  
(REF DART SPEC. M-DELRIN-R1.00)
- 2) TOLERANCES ARE PER DART QSI 018  
UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES

**D3183-045 BEARING ASSEMBLY**

- 1) ASSEMBLE D3183-5 BEARING AND  
D3183-9 CAP

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